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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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MITCHELL REID

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08/09/2005

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EXAMINER

CORRIELUS, JEAN B

ART UNIT

PAPER NUMBER

2637

DATE MAILED: 08/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/480,747

Applicant(s)

REID ET AL.

Examiner

Jean B. Corrielus

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6,8-24 and 26-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-5 is/are allowed.
- 6) ☒ Claim(s) 6,8-24,26-29 and 37-46 is/are rejected.
- 7) ☐ Claim(s) 30-36 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Objections

1. Claims 6, 8-24, 26-46 are objected to because of the following informalities:

Claim 6, line 4, "a" should be replaced by "the/said" so as to make use of antecedent in line 1; line 6, "an external" should be "the/said external" so as to make use of the antecedent in line 1; line 8, "a" should be replaced by "an".

Claim 9, "circuitry" should be replaced by "circuit" so as to be consistent with antecedent in claim 6, line 1.

Claim 10, should be rewritten as follow: " The modem of claim 9, wherein the modem circuit indicates synchronous modem transmission protocol information."

Claim 12, line 2, "word" should be deleted.

As per claim 13, line 1, before "the synchronous", "wherein" should be inserted; after "information", "is" should be inserted; before "serial", "asynchronous" should be inserted. The same comment applies to claim 20, respectively.

As per claim 14, line 1, before "the synchronous", "wherein" should be inserted.

As per claim 15, line 1, before "the synchronous", "wherein" should be inserted; before "serial", "asynchronous" should be inserted. The same comment applies to claim 16, respectively.

Claim 17 before "the synchronous", "wherein" should be inserted; indicating should be replaced by "indicates".

Claim 18, "circuitry" should be replaced by "circuit".

Claim 19, should be rewritten as follow: " The modem of claim 18, wherein the modem circuit indicates synchronous modem transmission protocol information."

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Claim 21 before "the synchronous", "wherein" should be inserted.

Claim 22 "wherein" should be inserted before "the signal".

Claim 23, line 1, "an" should be replaced by "a system side" so as to provide proper antecedent basis for subsequent limitation recited in lines 10-11; line 10, "a" should be replaced by "said/the"; line 12, "a" should be replaced by "an".

Claim 24, wherein" should be inserted before "the system" and "is" should be inserted before "configured".

Claim 26, line 2, "asynchronous" should be inserted before "serial pin"; after modem, "circuitry" should be inserted, so as to be consistent with recitation in claim 23, line 3; line 3 recites the "the interface" it seems that the applicant intended to recite "the asynchronous serial pin" if such assumption is correct, applicant is required to replace "the interface" by "the asynchronous serial pin"; lines 4-5, "asynchronous" should be inserted before "serial pin", in both occurrences.

Claim 27, "word" should be deleted.

Claim 28, before "the information", "wherein" should be inserted; "asynchronous" should be inserted before "serial pin". The same comment applies to claim 29.

Claim 30, line 1, "Circuitry" should be replaced by "A circuitry"; line 10, "an" should be replaced by " said/the" so as to make use of antecedent in line 7.

Claim 32, before "the synchronous", "wherein" should be inserted. The same comment applies to claims 33 and 35, respectively.

Claim 37, line 9, "a" should be replaced by "an"; line 11, "a" should be "the".

Claim 38, line 1, "wherein" should be inserted before "the line" and before "configured", "is" should be inserted.

Claim 40, lines 2, 5 and 6, "serial pin", should be replaced by "asynchronous serial interface pin", respectively, so as to be consistent with antecedent; line 3, "the interface", should be replaced by "asynchronous serial interface pin" so as to be consistent with antecedent, in claim 7, line 2.

Claim 41, "serial pin", should be replaced by "asynchronous serial interface pin" so as to be consistent with antecedent. The same comment applies to claim 42.

Claim 43, before "the synchronous", "wherein" should be inserted and "indicating" should be replaced by "indicates". The same comment applies to claim 46.

Claim 44, line 1, before "the synchronous", "wherein" should be inserted and "indicating" should be replaced by "indicates"; line 2, "the interface", should be replaced by "asynchronous serial interface pin" so as to be consistent with antecedent.

Claim 45, "serial pin", should be replaced by "asynchronous serial interface pin" so as to be consistent with antecedent.

Note that any claim whose base claim is objected is likewise objected.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 6, 8-24, 26-29 and 37-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blair et al. (cited in office action mailed March 21, 2004) in view of Arai (cited in IDS filed 12/29/2003) and further in view of Malotra US Patent No. 6,388,989.

Regarding claim 6 ; Blair et al. disclose almost all the claimed subject matter "providing an asynchronous serial port. . . single integrated circuit. . .communicate with a system-side external circuit. . .use the asynchronous serial port to transfer data formatted with a synchronous modem transmission protocol. . .between the single integrated circuit and the system-side external circuit through the asynchronous serial port" in claim 6 as follows. Blair et al. teach a DSP circuit (element 70) having an embedded UART (element 76) for communicating information with system-side external circuit (element 80) across a serial communications interface (Bi-directional arrow connecting UART'S 76). Note element 20 of fig. 2 where HDLC frame protocol is used. Note also that an end of frame indicator is inherent in Blair.

However, Blair et al. fails to teach integrating the modem circuitry and system-side line isolation circuitry within a single integrated circuit it also fail to teach the sending of an HDLC result frame after the end of the HDLC frame and before transmitting a new HDLC frame, the HDLC result frame including information indicating the status for the previously sent HDLC frame.

Arai disclose a Modem Apparatus comprising a modem apparatus (element 2) with line isolation circuitry (elements 16 and 17) integrated onto a single LSI circuit, note

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Figure 3 and Col. 2, lines 15-22. Therefore, it would have been obvious to one having ordinary skill in the art to modify Blair et al.'s teaching of performing synchronous to asynchronous conversion with Arai's integrated modem and isolation circuit, since Arai suggest in Col. 2, lines 16-22, that the result of the modification would reduce the size of the modem apparatus. Furthermore, Malhotra further teaches the sending of an HDLC result frame after the end of the HDLC frame and before transmitting a new HDLC frame, the HDLC result frame including information indicating the status for the previously sent HDLC frame see col. 2, lines 17-35. Given that fact, it would have been obvious to one skill in the art to incorporate such a teaching in Blair and Arai in order to ensure that frames are transferred effectively.

Regarding claim 8, Blair et al. teach the use of the modem adapter for communicating across a Wide Area Network using voltage protection circuitry, however, Blair et al. fails to teach transmitting across an isolation barrier. Arai teach the limitation of "transmitting across an isolation barrier", note figure 3 elements 16 and 17. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to Blair et al.'s modem with Arai's teaching of using isolation capacitors, since Arai suggest in Col. 2, lines 16-22, that the result of the modification would provide voltage protection and system isolation.

Regarding claim 9, Blair teaches transferring data see fig. 2.

Regarding claim 10, Blair et al. further teach the claimed subject matter, note Figures 5A- 5E, and Col. 6, lines 49-67.

Regarding claim 11, Blair et al. further teach the claimed subject matter, note Col. 6, lines 64-65.

Regarding claim 12, it would have been obvious that the frame result would have indicated that the HDLC frame was completed with an incorrect error check, and the motivation would have been the same as provided above in reference to claim 6.

Regarding claim 13, Blair et al. further teach the claimed subject matter "an output pin separate from the serial pin" by the inherency of the operation of the serial interface.

As per claim 14, it would have been obvious to one skill in the art to provide an end of frame signal as a synchronous modem protocol in order to indicate to the receiving device the end of the frame.

Regarding claim 15, Blair et al. further teach the claimed subject matter, note Figure 58 and Col. 6, lines 63-65.

Regarding claim 16, see claim 15.

Regarding claim 17, see claim 15.

Regarding claim 18, data is received by the modem see fig. 2.

Regarding claim 19, see claim 10.

Regarding claim 20, see claim 13.

Regarding claim 21, Blair et al. further teach the claimed subject matter "available to accept" by the inherency of the operation of the serial interface.

Regarding claim 22, Blair et al. further teaches the claimed subject matter "clear to send" by the inherency of the operation of the serial interface.

Regarding claim 23, see claim 11.

Regarding claim 24, see claim 8.

Regarding claim 26, as applied to claims and 11 and 21 , Blair et al further teaches the claimed subject matter, by providing the end of frame flag within the serial transmission, note Col. 6, lines 64-65.

Regarding claim 27, see claim 12.

Regarding claim 28, see claim 15.

As per claim 29, see claim 14.

Regarding claim 37, see claim 6.

Regarding claim 38, see claim 8.

Regarding claim 39, see claim 12.

Regarding claim 40, see claim 26.

As per claim 41, see claim 14.

Regarding claim 42, see claim 20.

As per claim 43, see claim 14.

Regarding claim 44, see claim 21.

Regarding claim 45, see claim 16.

Regarding claim 46, see claim 17.

Allowable Subject Matter

4. Claims 1-5 are allowed.

5. claims 30-36 would be allowable if amended to overcome the objection set forth above.

Response to Arguments

6. Applicant's arguments with respect to claims 6, 8-24, 26-29 and 37-46 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean B. Corrielus whose telephone number is 571-272-3020. The examiner can normally be reached on Maxi-Flex.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jean B Corrieus
Primary Examiner
Art Unit 2637 8/6/05